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SEQUENCE LISTING

<110> Lyon, Jeffrey A.
 Angov, Evelina
 Cohen, Joe D.
 Voss, Gerald

<120> Recombinant *P. falciparum* Merozoite Protein-1₄₂ Vaccine

<130> 003/238/SAP

<140> US 10/057,532

<141> 2002-01-25

<150> US 60/264,535, US 60/347,564

<151> 2001-01-26, 2001-10-26

<160> 12

<170> Apple Macintosh Microsoft Word 6.0

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<212> PRT

<213> Artificial sequence

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Pro	Ile	Leu	Asp	Glu	Ile	Ala	Asp	Glu	Tyr		
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Ile	Asp	Gln	Asn	Pro	Gly	Thr	Ala	Pro	Lys
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Tyr	Gly	Ile	Arg	Gly	Ile	Pro	Thr	Leu	Leu
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Leu	Gly	Thr	Asp	Asp	Asp	Asp	Lys	Ala	Met
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Thr	Met	Ala	Ile	Ser	Val	Thr	Met	Asp	Asn
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Val	Ile	Tyr	Leu	Lys	Pro	Leu	Ala	Gly	Val
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Glu	Asn	Asp	Ile	Lys	Phe	Ala	Gln	Glu	Gly
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Tyr	Lys	Asp	Asp	Leu	Glu	Ser	Ile	Lys	Lys
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Val	Ile	Lys	Glu	Glu	Lys	Glu	Lys	Phe	Pro
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	375		380
Ala His Val Lys	Ile Thr Lys Leu Ser Asp		
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Phe Lys Asn Pro	Tyr Asp Phe Glu Ala Ile		
	405		410
Lys Lys Leu Ile	Asn Asp Asp Thr Lys Lys		
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Asp Met Leu Gly	Lys Leu Leu Ser Thr Gly		
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Leu Val Gln Asn	Phe Pro Asn Thr Ile Ile		
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Ser Lys Leu Ile	Glu Gly Lys Phe Gln Asp		
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Lys Cys Leu Leu	Asn Tyr Lys Gln Glu Gly		
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Asp Lys Cys Val	Glu Asn Pro Asn Pro Thr		
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Ser Ser Arg Lys	Lys Ile Thr Cys Glu Cys		
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<213> Artificial sequence

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Asp	Asp	Lys	Ala	Met	Ala	Asp	Ile	Gly	Ser	45	50	
Ile	Glu	Gly	Arg	Gly	Thr	Met	Ala	Ile	Ser	55	60	
Val	Thr	Met	Asp	Asn	Ile	Leu	Ser	Gly	Phe	65	70	
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Pro	Leu	Ala	Gly	Val	Tyr	Arg	Ser	Leu	Lys	85	90	
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Arg	Leu	Lys	Lys	Arg	Lys	Tyr	Phe	Leu	Asp	115	120	
Val	Leu	Glu	Ser	Asp	Leu	Met	Gln	Phe	Lys	125	130	
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Asp	Ser	Phe	Lys	Leu	Leu	Asn	Ser	Glu	Gln	155	150	
Lys	Asn	Thr	Leu	Leu	Lys	Ser	Tyr	Lys	Tyr	165	160	
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Thr	Pro	Pro	Ser	Pro	Ala	Lys	Thr	Asp	Glu	225	220	
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Leu Val Asn Lys	Ile Asp Asp Tyr Leu Ile	255	250
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Val Glu Lys Asp	Glu Ala His Val Lys Ile	275	270
Thr Lys Leu Ser	Asp Leu Lys Ala Ile Asp	285	280
Asp Lys Ile Asp	Leu Phe Lys Asn Pro Tyr	295	290
Asp Phe Glu Ala	Ile Lys Lys Leu Ile Asn	305	300
Asp Asp Thr Lys	Lys Asp Met Leu Gly Lys	315	310
Leu Leu Ser Thr	Gly Leu Val Gln Asn Phe	325	320
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Glu Arg Glu Glu	Cys Lys Cys Leu Leu Asn	375	370
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<213> Artificial sequence

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Ile	Lys	Phe	Ala	Gln	Glu	Gly	Ile	Ser	Tyr	
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Tyr	Glu	Lys	Val	Leu	Ala	Lys	Tyr	Lys	Asp	
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Asp	Leu	Glu	Ser	Ile	Lys	Lys	Val	Ile	Lys	
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Pro	Thr	Thr	Pro	Pro	Ser	Pro	Ala	Lys	Thr	
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Cys Thr Glu Glu	Asp Ser Gly Ser Ser Arg	
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<212> DNA

<213> *Plasmodium falciparum* 3D7 MSP1₄₂

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taaattcacg	tcttaagaaa	cgaaaatatt	tcttagatgt	200
attagaatct	gatttaatgc	aatttaaaca	tatatactca	240
aatgaataca	ttattgaaga	ttcatttaaa	ttattgaatt	280
cagaacaaaa	aaacacactt	ttaaaaagtt	acaaatatat	320
aaaagaatca	gtagaaaatg	atattaaatt	tgcacaggaa	360
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agttaataaaa attgacgatt acttaattaa cttaaaggca 600
aagattaacg attgtaatgt tgaaaaagat gaagcacatg 640
ttaaaataac taaacttagt gattttaaag caattgatga 680
caaaatagat ctttttataaa accctaccga cttcgaagca 720
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taatacaata atatcaaaat taattgaagg aaaattccaa 840
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aatgtccaga aaattctgga tgtttcagac atttagatga 920
aagagaagaa tgtaaatggt tattaaatta caaacaagaa 960
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aaaataatgg tggatgtgat gcagatgcca catgtaccga 1040
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<213> *Plasmodium falciparum* 3D7 MSP1₄₂

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Thr Phe Asn Leu Asn Leu Asn Asp Ile Leu
          55          60
Asn Ser Arg Leu Lys Lys Arg Lys Tyr Phe
          65          70
Leu Asp Val Leu Glu Ser Asp Leu Met Gln
          75          80
Phe Lys His Ile Ser Ser Asn Glu Tyr Ile
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Ile Glu Asp Ser Phe Lys Leu Leu Asn Ser
          95         100
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Lys Tyr Ile Lys Glu Ser Val Glu Asn Asp
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Asp	Glu	Gln	Lys	165	Lys	Glu	Ser	Lys	Phe	170
Pro	Phe	Leu	Thr	175	Asn	Ile	Glu	Thr	Leu	180
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Leu	Ile	Asn	Leu	195	Lys	Ala	Lys	Ile	Asn	200
Cys	Asn	Val	Glu	205	Lys	Asp	Glu	Ala	His	210
Lys	Ile	Thr	Lys	215	Leu	Ser	Asp	Leu	Lys	220
Ile	Asp	Asp	Lys	225	Ile	Asp	Leu	Phe	Lys	230
Pro	Thr	Asp	Phe	235	Glu	Ala	Ile	Lys	Lys	240
Ile	Asn	Asp	Asp	245	Thr	Lys	Lys	Asp	Met	250
Gly	Lys	Leu	Leu	255	Ser	Thr	Gly	Leu	Val	260
Ile	Phe	Pro	Asn	265	Thr	Ile	Ile	Ser	Lys	270
Ile	Glu	Gly	Lys	275	Phe	Gln	Asp	Met	Leu	280
Ile	Ser	Gln	His	285	Gln	Cys	Val	Lys	Lys	290
Cys	Pro	Glu	Asn	295	Ser	Gly	Cys	Phe	Arg	300
Leu	Asp	Glu	Arg	305	Glu	Glu	Cys	Lys	Cys	310
Leu	Asn	Tyr	Lys	315	Gln	Glu	Gly	Asp	Lys	320
Val	Glu	Asn	Pro	325	Asn	Pro	Thr	Cys	Asn	330
Asn	Asn	Gly	Gly	335	Cys	Asp	Ala	Asp	Ala	340
Cys	Thr	Glu	Glu	345	Asp	Ser	Gly	Ser	Ser	350
Lys	Lys	Ile	Thr	355	Cys	Glu	Cys	Thr	Lys	360
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10/14

<210> 6

<211> 1176

<212> DNA

<213> Artificial sequence

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<223> *E. coli* expressed *P. falciparum* MSP-1₄₂ (3D7)

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ccttt	agctg	gagtatatag	aagcttaaaa	aaacaaattg	160
aaaaaa	acat	ttttacattt	aattttaaatt	tgaacgatat	200
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gtatt	agaat	ctgatttaat	gcaattttaa	catataatcct	280
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aaggaga	agt	tcccatcatc	accaccaaca	acacctccgt	520
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ccttcc	at	ttacaaaca	ttgagacctt	atacaataac	600
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cgaaaata	aat	ggtggatgtg	atgcagatgc	cacatgtacc	1080
gaagaaga	t	caggtagcag	cagaaagaaa	atcacatgtg	1120
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<211> 391

<212> PRT

<213> Artificial sequence

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Glu	Asn	Glu	Tyr	Asp	Val	Ile	Tyr	Leu	Lys	
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Pro	Leu	Ala	Gly	Val	Tyr	Arg	Ser	Leu	Lys	
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Lys	Gln	Ile	Glu	Lys	Asn	Ile	Phe	Thr	Phe	
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Asn	Leu	Asn	Leu	Asn	Asp	Ile	Leu	Asn	Ser	
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Arg	Leu	Lys	Lys	Arg	Lys	Tyr	Phe	Leu	Asp	
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Val	Leu	Glu	Ser	Asp	Leu	Met	Gln	Phe	Lys	
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His	Ile	Ser	Ser	Asn	Glu	Tyr	Ile	Ile	Glu	
				95					100	
Asp	Ser	Phe	Lys	Leu	Leu	Asn	Ser	Glu	Gln	
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Lys	Asn	Thr	Leu	Leu	Lys	Ser	Tyr	Lys	Tyr	
				115					120	
Ile	Lys	Glu	Ser	Val	Glu	Asn	Asp	Ile	Lys	
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Phe	Ala	Gln	Glu	Gly	Ile	Ser	Tyr	Tyr	Glu	
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Glu	Ser	Ile	Lys	Lys	Val	Ile	Lys	Glu	Glu	
				155					160	
Lys	Glu	Lys	Phe	Pro	Ser	Ser	Pro	Pro	Thr	
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Thr	Pro	Pro	Ser	Pro	Ala	Lys	Thr	Asp	Glu	
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Gln	Lys	Lys	Glu	Ser	Lys	Phe	Leu	Pro	Phe	
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Leu	Thr	Asn	Ile	Glu	Thr	Leu	Tyr	Asn	Asn	
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Leu	Val	Asn	Lys	Ile	Asp	Asp	Tyr	Leu	Ile	
				205					210	
Asn	Leu	Lys	Ala	Lys	Ile	Asn	Asp	Cys	Asn	
				215					220	
Val	Glu	Lys	Asp	Glu	Ala	His	Val	Lys	Ile	
				225					230	
Thr	Lys	Leu	Ser	Asp	Leu	Lys	Ala	Ile	Asp	
				235					240	
Asp	Lys	Ile	Asp	Leu	Phe	Lys	Asn	Pro	Tyr	
				245					250	

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Asp	Phe	Glu	Ala	Ile	Lys	Lys	Leu	Ile	Asn
				255					260
Asp	Asp	Thr	Lys	Lys	Asp	Met	Leu	Gly	Lys
				265					270
Leu	Leu	Ser	Thr	Gly	Leu	Val	Gln	Asn	Phe
				275					280
Pro	Asn	Thr	Ile	Ile	Ser	Lys	Leu	Ile	Glu
				285					290
Gly	Lys	Phe	Gln	Asp	Met	Leu	Asn	Ile	Ser
				295					300
Gln	His	Gln	Cys	Val	Lys	Lys	Gln	Cys	Pro
				305					310
Glu	Asn	Ser	Gly	Cys	Phe	Arg	His	Leu	Asp
				315					320
Glu	Arg	Glu	Glu	Cys	Lys	Cys	Leu	Leu	Asn
				325					330
Tyr	Lys	Gln	Glu	Gly	Asp	Lys	Cys	Val	Glu
				335					340
Asn	Pro	Asn	Pro	Thr	Cys	Asn	Glu	Asn	Asn
				345					350
Gly	Gly	Cys	Asp	Ala	Asp	Ala	Thr	Cys	Thr
				355					360
Glu	Glu	Asp	Ser	Gly	Ser	Ser	Arg	Lys	Lys
				365					370
Ile	Thr	Cys	Glu	Cys	Thr	Lys	Pro	Asp	Ser
				375					380
Tyr	Pro	Leu	Phe	Asp	Gly	Ile	Phe	Cys	Ser
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Ser

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<213> Artificial sequence

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<223> CpG oligonucleotide

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24

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cacaatgg 48

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<220>

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gggcatatgg	cacaccatca	tcatcatcat	cccgggggat	40
ccggttctgg	taccgac			57